

PROJECT TITLE AND RATIONALE: Arctic islands ecological responses to climate change

SUMMARY OF THE PROJECT FOR AN APPLICATION FOR APPROVAL FOR THE USE OF WATER OR DEPOSIT OF WASTE WITHOUT A LICENCE to the NUNAVUT WATER BOARD - 150429 8WLC-AER-

TIME PERIOD: August 1st 2015 – August 31st 2015

LOCATION: Ellesmere Island, Nunavut Canada (81.23°N, -65.15°E). On the peninsula near Cape Baird, north of Nares Strait and immediately to the south of Quttinirpaaq National Park of Canada and Lady Franklin Bay.

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PROJECT PERSONNEL: Fredrik Dalerum, Tomas Meijet, Patricia Pecnerova, Nicolas Lecomte

ABSTRACT:

- (1) The aim of the project is first to analyse the current processes in the Arctic terrestrial ecosystems including vegetation, herbivores and predators.
- (2) We will also use past records in permafrost sediments to analyse how plant communities have changed as a response to climatic change. These analyses will provide information about the past composition of tundra ecosystems in the study sites. They will also allow a better understanding of extinction processes in relation with climate change at the end of the last glacial period; knowledge that is crucial to predict consequences of the present climate change on arctic species. The site on Ellesmere Island will be part of a circumpolar research effort targeting these questions. Management implications: These results will help us to model the impact of climate change in arctic flora and fauna in the future.

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